

AMENDMENTS TO THE CLAIMS:

This listing of the claims will replace all prior versions, and listings, of the claims in this application.

Listing of Claims:

1. (PREVIOUSLY PRESENTED) A method of delivering a packet in a scatternet having a network topology comprising:

creating a direct radio communications link between a first device in a first piconet of a scatternet and a destination device in a second piconet of the scatternet, wherein the direct radio communications link creates a short-circuit in the network topology; and,

transmitting the packet via the direct radio communications link.

2. (ORIGINAL) A method as claimed in claim 1, wherein the destination device is joined to the first piconet.

3. (PREVIOUSLY PRESENTED) A method as claimed in claim 1, wherein the step of creating a direct radio communications link creates a third piconet between the first piconet and the second piconet.

4. (ORIGINAL) A method as claimed in claim 3, wherein the first device operates as Master of the third piconet.

5. (PREVIOUSLY PRESENTED) A method as claimed in claim 1, wherein the scatternet has a topology defined at initiation of the scatternet and creating the direct radio communications link adjusts the topology of the scatternet.

6. (Cancelled)

7. (PREVIOUSLY PRESENTED) A method as claimed in claim 1, wherein a piconet is a star-topology low power radio frequency network comprising a Master as a central node and one or more Slaves as dependent nodes, each of which has a radio communications link to the Master, and a scatternet is a distributed low power radio frequency network comprising a plurality of piconets that are interconnected by radio communication links.

8. (PREVIOUSLY PRESENTED) A method as claimed in claim 1, wherein the first device and/or the destination device are mobile.

9. (PREVIOUSLY PRESENTED) A method as claimed in claim 1, further comprising:
determining whether the creation of a direct radio communications link between the first device and the destination device is possible.

10. (ORIGINAL) A method as claimed in claim 9, wherein the packet comprises an address of the destination device and the step of determining uses the identity of the destination device.

11. (ORIGINAL) A method as claimed in claim 10, wherein the step of determining comprises determining if the destination device is within radio communication range of the first device.

12. (ORIGINAL) A method as claimed in claim 9, wherein the first device maintains a list of devices within radio communication range.

13. (ORIGINAL) A method as claimed in claim 12, wherein the list comprises, for each device within communication range, an address and a clock offset.

14. (PREVIOUSLY PRESENTED) A method as claimed in claim 12, wherein the list is maintained using the Bluetooth Inquiry procedure.

15. (PREVIOUSLY PRESENTED) A method as claimed in claim 12, wherein the step of determining comprises the first device determining whether the destination device is included in the list.

16. (ORIGINAL) A method as claimed in claim 15, wherein the comparison occurs within the Bluetooth Link layer.

17. (PREVIOUSLY PRESENTED) A method as claimed in claim 1, wherein the direct radio communications link is temporary.

18. (ORIGINAL) A method as claimed in claim 17, wherein the direct radio communications link is released after a predetermined period of inactivity.

19. (PREVIOUSLY PRESENTED) A method as claimed in claim 1, wherein the packet is a routing request.

20. (PREVIOUSLY PRESENTED) A method of delivering a packet from a first device in a first star-topology sub-network of a distributed low power radio frequency network having a network topology to a destination device in a second star-topology sub-network of the distributed network comprising:

creating a direct low power radio frequency communications link between the first device and the destination device that creates a short-circuit in the network topology; and,

transmitting the packet via the direct low power radio frequency communications link.

21. (CURRENTLY AMENDED) A memory embodying a computer program ~~embodied on a memory~~ and executable by a processor to perform a method as claimed in claim 1.

22. (PREVIOUSLY PRESENTED) A device for participating in a first piconet of a scatternet

having a network topology and for delivering a packet to a destination device in a second piconet of the scatternet comprising:

means for creating a new direct radio communications link to the destination device that creates a short-circuit in the network topology while maintaining an existing direct radio communications link of the scatternet within the first piconet; and,

a radio transmitter for transmitting the packet via the new direct communications link.

23. (PREVIOUSLY PRESENTED) A method of delivering a packet from a first device in a first piconet of a scatternet having a network topology to a destination device in a second piconet of the scatternet comprising:

receiving the packet at the first device;

determining whether the creation of a direct radio communications link between the first device and the destination device that short-circuits the network topology is possible; and,

if it is not possible, forwarding the packet within the scatternet.

24. (ORIGINAL) A method as claimed in claim 23, further comprising adding an address of the first device to the packet before forwarding it.

25. (PREVIOUSLY PRESENTED) A method as claimed in claim 23, wherein the received packet is transferred from a network layer to a link layer and, if possible, the link layer creates a direct radio communications link with the destination device and, if not possible, the link layer forwards the received packet.

26. (PREVIOUSLY PRESENTED) A method as claimed in claim 23, wherein the received packet is buffered in a network layer and a notification comprising the address of the destination device is transferred to a link layer and, if possible, the link layer creates a direct radio communications link with the destination device and, if not possible, replies to the network layer which transfers the received packet to the link layer for forwarding.

27. (ORIGINAL) A method as claimed in claim 23, wherein the method further comprises, if the creation of a direct radio communications link between the first device and the destination device is possible, creating a direct radio communications link between the first device and the destination device.

28. (ORIGINAL) A method as claimed in claim 23, wherein the received packet is a route request packet and the method further comprises, if the creation of a direct radio communications link between the first device and the destination device is possible, transmitting a reply packet to a source of the received route request packet.

29. (PREVIOUSLY PRESENTED) A method of determining a route from a source device in a first piconet of a scatternet having a network topology to a destination device in a second piconet of that scatternet comprising, before generating a routing request, determining, at the source device, whether the creation of a direct radio communications link between the source device and the destination device that short-circuits the network topology is possible; and if it is not possible, generating, at the source device, a routing request for forwarding within the scatternet.

30. (ORIGINAL) A method as claimed in claim 29, wherein the method further comprises, if the creation of a direct radio communications link between the first device and the destination device is possible, creating a direct radio communications link between the first device and the destination device.

31. (PREVIOUSLY PRESENTED) A method of delivering a packet from a first device in a first piconet of a scatternet having a network topology to a destination device in a second piconet of

that scatternet comprising:

creating a third piconet between the first piconet and the second piconet that short circuits the network topology; and,

transmitting the packet via the third piconet.

32. (ORIGINAL) A method as claimed in claim 31, wherein the first device operates as Master of the third piconet.

33. (PREVIOUSLY PRESENTED) A method as claimed in claim 31, wherein the step of creating a third piconet comprises creating a direct radio communications link between the first device and the destination device.

34. (PREVIOUSLY PRESENTED) A method as claimed in claim 31, wherein the scatternet has a topology defined at initiation of the scatternet and creating a third piconet adjusts the topology of the scatternet.

35. (CANCELLED)

36. (PREVIOUSLY PRESENTED) A method as claimed in claim 31, wherein a piconet is a star-topology low power radio frequency network comprising a Master as a central node and one or more Slaves as dependent nodes, each of which has a radio communications link to the Master, and a scatternet is a distributed low power radio frequency network comprising a plurality of piconets that are interconnected by radio communication links.